

07-19-06

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE



In Application of:

Farnworth et al.

Serial No.: 09/875,063

Filed: June 6, 2001

For: GROUP ENCAPSULATED DICING  
CHUCK

Confirmation No.: 7843

Examiner: M. Rachuba

Group Art Unit: 3723

Attorney Docket No.: 2269-4245US  
(98-0288.00/US)

NOTICE OF EXPRESS MAILING

Express Mail Mailing Label Number: EV669816510US

Date of Deposit with USPS: July 18, 2006

Person making Deposit: Wendy Neff

PETITION TO WITHDRAW HOLDING OF ABANDONMENT  
PURSUANT TO 37 C.F.R. §1.181

Mail Stop Petition  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Applicants hereby petition the Commissioner of Patents and Trademarks to invoke the supervisory authority of the Commissioner, pursuant to 37 C.F.R. §1.181, to withdraw the Office's holding of abandonment in the above-captioned patent application.

BEST AVAILABLE COPY

STATEMENT OF FACTS AND POINTS TO BE REVIEWED

On **November 14, 2005**, the Patent Office mailed a non-final Office Action in the above-captioned patent application. On **February 14, 2006**, Applicants responded, by First Class Mail, by filing a Transmittal Form (1 page with duplicate copy), Amendment in Response to Office Action dated November 14, 2005 (22 pages), Replacement Drawing Sheets (3 sheets) and Annotated Sheets Showing Changes (3 sheets).

Applicants then received a Notice of Abandonment with a mailing date of **July 5, 2006**. The Notice of Abandonment lists the reason for abandonment as "Applicant's failure to timely file a proper reply to the Office letter mailed on 14 November 2005."

In the present situation, Applicants filed an appropriate response in a timely manner by First Class Mail within the initial period of response of February 14, 2006, as evidenced by the Certificate of Mailing and by the enclosed copy of the date-stamped return postcard. Accordingly, the holding of abandonment by the Office is inappropriate and in error, and should be withdrawn.

A copy of the Notice of Abandonment with a mailing date of July 5, 2006 is enclosed. Also enclosed are copies of documents filed February 14, 2006, including: Transmittal Form (1 page with duplicate copy); Amendment in Response to Office Action dated November 14, 2005 (22 pages); Replacement Drawing Sheets (3 sheets); and Annotated Sheets Showing Changes (3 sheets). Additionally, a copy of the date-stamped return postcard evidencing receipt of the foregoing documents as well as a receipt date by the Office of February 16, 2006 is enclosed.

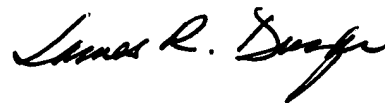
No fee for this petition to the Commissioner is required under 37 C.F.R. 1.181(d), as indicated by MPEP §711.03(c).

Applicants respectfully submit that this petition is timely filed, as the Notice of Abandonment was mailed by the Patent Office on July 5, 2006 and Applicants have filed this petition within two months of the mailing date of the Notice of Abandonment.

RELIEF REQUESTED

Applicants respectfully request that this petition be granted and the holding of abandonment be withdrawn promptly, the Amendment be entered herein, prosecution of this matter before the Examiner be reopened.

Respectfully submitted,



James R. Duzan  
Registration No. 28,393  
Attorney for Applicants  
TRASKBRITT  
P.O. Box 2550  
Salt Lake City, Utah 84110-2550  
Telephone: 801-532-1922

Date: July 18, 2006

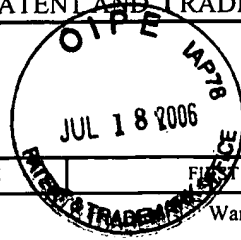
JRD/dlm:lmh

Enclosures: Copy of the Notice of Abandonment (2 pages)  
Copy of Transmittal Form (1 page with duplicate copy)  
Copy of Amendment in Response to Office Action dated November 14, 2005  
(22 pages)  
Replacement Drawing Sheets (3 sheets)  
Annotated Sheets Showing Changes (3 sheets)  
Copy of date-stamped return postcard (1 page)

Document in ProLaw



# UNITED STATES PATENT AND TRADEMARK OFFICE



UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FILED NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/875,063	06/06/2001	Warren M. Farnworth	4245US (98-0288)	7843
24247	7590	07/05/2006	EXAMINER	

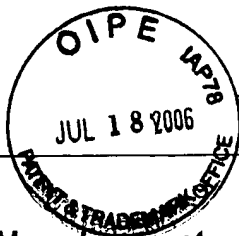
TRASK BRITT  
P.O. BOX 2550  
SALT LAKE CITY, UT 84110

RACHUBA, MAURINA T

ART UNIT	PAPER NUMBER
3723	

DATE MAILED: 07/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.



# **Notice of Abandonment**

Application No.

09/875,063

Examiner

M Rachuba

Applicant(s)

FARNWORTH ET AL.

Art Unit

3723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

This application is abandoned in view of:

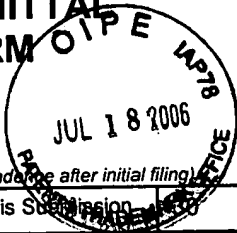
1. ☒ Applicant's failure to timely file a proper reply to the Office letter mailed on 14 November 2005.
  - (a) ☐ A reply was received on \_\_\_\_\_ (with a Certificate of Mailing or Transmission dated \_\_\_\_\_), which is after the expiration of the period for reply (including a total extension of time of \_\_\_\_\_ month(s)) which expired on \_\_\_\_\_.
  - (b) ☐ A proposed reply was received on \_\_\_\_\_, but it does not constitute a proper reply under 37 CFR 1.113 (a) to the final rejection.  
(A proper reply under 37 CFR 1.113 to a final rejection consists only of: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114).
  - (c) ☐ A reply was received on \_\_\_\_\_ but it does not constitute a proper reply, or a bona fide attempt at a proper reply, to the non-final rejection. See 37 CFR 1.85(a) and 1.111. (See explanation in box 7 below).
  - (d) ☒ No reply has been received.
2. ☐ Applicant's failure to timely pay the required issue fee and publication fee, if applicable, within the statutory period of three months from the mailing date of the Notice of Allowance (PTOL-85).
  - (a) ☐ The issue fee and publication fee, if applicable, was received on \_\_\_\_\_ (with a Certificate of Mailing or Transmission dated \_\_\_\_\_), which is after the expiration of the statutory period for payment of the issue fee (and publication fee) set in the Notice of Allowance (PTOL-85).
  - (b) ☐ The submitted fee of \$ \_\_\_\_\_ is insufficient. A balance of \$ \_\_\_\_\_ is due.  
The issue fee required by 37 CFR 1.18 is \$ \_\_\_\_\_. The publication fee, if required by 37 CFR 1.18(d), is \$ \_\_\_\_\_.
  - (c) ☐ The issue fee and publication fee, if applicable, has not been received.
3. ☐ Applicant's failure to timely file corrected drawings as required by, and within the three-month period set in, the Notice of Allowability (PTO-37).
  - (a) ☐ Proposed corrected drawings were received on \_\_\_\_\_ (with a Certificate of Mailing or Transmission dated \_\_\_\_\_), which is after the expiration of the period for reply.
  - (b) ☐ No corrected drawings have been received.
4. ☐ The letter of express abandonment which is signed by the attorney or agent of record, the assignee of the entire interest, or all of the applicants.
5. ☐ The letter of express abandonment which is signed by an attorney or agent (acting in a representative capacity under 37 CFR 1.34(a)) upon the filing of a continuing application.
6. ☐ The decision by the Board of Patent Appeals and Interference rendered on \_\_\_\_\_ and because the period for seeking court review of the decision has expired and there are no allowed claims.
7. ☐ The reason(s) below:

M Rachuba  
Primary Examiner  
Art Unit: 3723

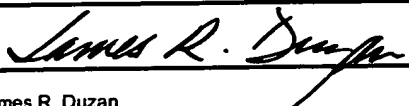
6/26/06

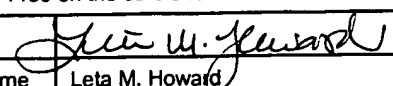
Petitions to revive under 37 CFR 1.137(a) or (b), or requests to withdraw the holding of abandonment under 37 CFR 1.181, should be promptly filed to minimize any negative effects on patent term.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

<b>TRANSMITTAL FORM</b>  (to be used for all correspondence after initial filing)	Application Number	09/875,063
	Filing Date	June 6, 2001
	First Named Inventor	Farnworth et al.
	Art Unit	3723
	Examiner Name	M. Rachuba
	Attorney Docket Number	2269-4245US (98-0288.00/US)
Total Number of Pages in This Submission		

ENCLOSURES (check all that apply)		
<input type="checkbox"/> Fee Transmittal Form  <input type="checkbox"/> Fee Attached <input checked="" type="checkbox"/> Amendment in Response to Office Action dated November 14, 2005 <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s)  <input type="checkbox"/> Extension of Time Request  <input type="checkbox"/> Express Abandonment Request  <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Reply to Missing Parts/ Incomplete Application <input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53	<input checked="" type="checkbox"/> Replacement Drawing Sheets (3 sheets), Annotated Sheets Showing Changes (3 sheets) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer  <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____ <input type="checkbox"/> Landscape Table on CD	<input type="checkbox"/> After Allowance Communication to TC  <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)  <input type="checkbox"/> Proprietary Information  <input type="checkbox"/> Status Letter  <input type="checkbox"/> Other Enclosure(s) (please identify below):
<b>Remarks</b> The Commissioner is authorized to charge any additional fees required but not submitted with any document or request requiring fee payment under 37 C.F.R. §§ 1.16 AND 1.17 TO Deposit Account 20-1469 during pendency of this application.		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT			
Firm	TraskBritt, P.C.		
Signature			
Printed Name	James R. Duzan		
Date	February 14, 2006	Reg. No.	28,393

CERTIFICATE OF TRANSMISSION/MAILING			
I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.			
Signature			
Typed or printed name	Leta M. Howard	Date	February 14, 2006

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

THE PATENT & TRADEMARK OFFICE MAILROOM DATE  
STAMPED HEREON IS AN ACKNOWLEDGEMENT THAT ON THIS  
DATE THE PATENT & TRADEMARK OFFICE RECEIVED:

Transmittal Form (1 page with duplicate copy), Amendment in Response  
to Office Action dated November 14, 2005 (22 pages), Replacement  
Drawing Sheets (3 sheets), Annotated Sheets Showing Changes (3 sheets).

Invention: GROUP ENCAPSULATED DICING CHUCK  
Applicant(s): Farnworth et al.  
Filing Date: June 6, 2001  
Serial No.: 09/875,063  
Date Sent: February 14, 2006 via first class mail  
Docket No.: 2269-4245US  
JRD/lmh

RECEIVED

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TRASKBRITT, P.C.





**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**In re Application of:**

Farnworth et al.

**Serial No.:** 09/875,063

**Filed:** June 6, 2001

**For:** GROUP ENCAPSULATED DICING  
CHUCK

**Confirmation No.:** 7843

**Examiner:** M. Rachuba

**Group Art Unit:** 3723

**Attorney Docket No.:** 2269-4245US  
(98-0288.00/US)

**CERTIFICATE OF MAILING**

I hereby certify that this correspondence along with any attachments referred to or identified as being attached or enclosed is being deposited with the United States Postal Service as First Class Mail on the date of deposit shown below with sufficient postage and in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

February 14, 2006  
Date

*Leta M. Howard*  
Signature

Leta M. Howard  
Name (Type/Print)

**AMENDMENT**

Mail Stop Amendment  
Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

Sir:

The following amendments and remarks are filed in response to the Examiner's remarks in the Office Action mailed November 14, 2005, the three-month shortened statutory period for response to which expires on February 14, 2006.

**Amendments to the Specification** begin on page 3 of this paper.

**Amendments to the Claims** are reflected in the listing of claims which begins on page 7 of this paper.

**Amendments to the Drawings** begin on page 19 of this paper and include both an attached replacement sheet and an annotated sheet showing changes.



**Serial No. 09/875,063**

**Remarks** begin on page 20 of this paper.

An **Appendix** including amended drawing figures is attached following page 22 of this paper.

**Amendments to the Specification:**

Please amend paragraph [0028] as follows:

[0028] As illustrated in drawing FIGS. 1 and 2, an exemplary wafer saw 10 to be used with the present invention is comprised of a base 12 to which extension arms 14 and 15 suspended by support 16 are attached. A substrate saw blade 18 is attached to a spindle or hub 20 which is rotatably attached to the extension arm 15. The blade 18 may be secured to the hub 20 and extension arm 15 by a threaded nut 21 or other means of attachment known in the art. The substrate saw 10 also includes a translatable substrate table 22 movably attached in both X and Y directions (as indicated by arrows in drawing FIGS. 1 and 2) to the base 12. The table 22 used to hold the chuck 500, 500' (See drawing FIGS. 7, 8, 13, and 14) of the present invention thereon by any suitable attachment apparatus. Alternatively, blade 18 may be translatable relative to the table 22 to achieve the same relative X-Y movement of the blade 18 to the table 22. A substrate 24 to be scribed or sawed at 24' may be securely mounted to the table 22. As used herein, the term "saw" includes scribing of a substrate, the resulting scribe line not completely extending through the substrate. Further, the term "substrate" includes any suitable type substrate to which a semiconductor device may be attached, such as FR-4 board, silicon substrate, traditional full semiconductor wafers of silicon, gallium arsenide, or indium phosphide and other semiconductor materials, partial wafers, and other equivalent structures known in the art wherein a semiconductor material table or substrate is present. For example, so-called silicon-on-insulator or "SOI" structures, wherein silicon is carried on a glass, ceramic or sapphire ("SOS") base, or other such structures as known in the art, are encompassed by the term "substrate" as used herein. Likewise, "semiconductor substrate" may be used to identify wafers and other structures to be singulated into smaller elements.

Please amend paragraph [0031] as follows:

[0031] Referring now to drawing FIG. 3, another illustrated embodiment of a substrate saw 30 is shown having two laterally spaced blades 32 and 34 with their centers of rotation "C" in substantial parallel alignment transverse to the planes of the blades. For a rectangular substrate or a conventional substantially circular silicon semiconductor wafer each having a

plurality of similarly configured semiconductor devices 42 (not shown) or integrated circuits 42 (not shown) arranged in evenly spaced rows and columns, the blades can be spaced a distance "D" substantially equal to the distance between adjacent areas 44 or streets 44 (not shown) defining the space between each integrated circuit 42. In addition, if the areas 44 of a substrate 40 or streets 44 of wafer 40 are too closely spaced for side-by-side blades 32 and 34 to cut along adjacent streets, the blades 32 and 34 can be spaced a distance "D" substantially equal to the distance between two or more areas 44 or streets 44. For example, a first pass of the blades 32 and 34 could cut along streets 44a and 44c and a second pass along streets 44b and 44d. The blades could then be indexed to cut the next series of areas or streets and the process repeated as desired number of times. If, however, the semiconductor devices 42 of a substrate 40 or integrated circuits 42 of a wafer 52 have various sizes, such as integrated circuits 50 and 51 as illustrated in drawing FIG. 9, at least one blade 34 is laterally translatable relative to the other blade 32 to cut along the areas or streets 44, such as street 56, separating the variously sized integrated circuits 50. The blade 34 may be variously translatable by a stepper motor 36 having a lead screw 38 or by other devices known in the art, such as high precision gearing in combination with an electric motor or hydraulics, or other suitable mechanical drive and control assemblies. For a substrate 40 or wafer 52, the integrated circuits, such as integrated circuits 50 and 51, may be diced by setting the blades 32 and 34 to simultaneously cut along areas 58 or 59 (~~See~~ drawing FIG.-6- 6) streets 56 and 57, indexing the blades, setting them to a wider lateral spread and cutting along areas 56 or 57 or areas 58 and 59, indexing the blades while monitoring the same lateral spread or separation and cutting along streets 60 and 61, and then narrowing the blade spacing and indexing the blades and cutting along other areas (not shown) and streets 62 and 63. The substrate 40 or wafer 52 could then be rotated 90° and the blade separation and indexing process repeated for areas 58 or 59 or vice versa (~~See~~ drawing FIG.-6- 6) and streets 64 and 65, streets 66 and 67, and streets 68 and 69.

Please amend paragraph [0040] as follows:

[0040] Referring to drawing FIG. 7, illustrated in a top view is a dicing chuck 500 suitable for use with the table 22 of the substrate saw 10 and the substrate 40 illustrated in drawing FIGS. 5 and 6. The chuck 500 comprises a chuck table 502 having a shaft 528 (Fig. FIG. 8) attached thereto for mounting on the table 22 using suitable apparatus, a plurality of cutting pedestals 504 having the desired spacing to mate with the semiconductor devices 42 of substrate 40 and connectors 306 of another side 302 of substrate 40, a pair of clamps 506 mounted on clamp pedestals 508 (see drawing FIG. 8), and one or more alignment pins 510, if desired, for aligning the substrate 40 on the chuck 500. Each cutting pedestal 504 includes a portion 512 having an aperture 514 therein for mating with the portion of the semiconductor device 42 on another side 302 thereof and portions 516 having a plurality of recessed areas 518 therein for mating with the connectors 306 in areas 308 (see drawing FIG. 6) of another side 302 of substrate 40. The aperture 514 in the cutting pedestal 504 may be connected to a source of vacuum (not shown) to help retain the semiconductor devices 42 on the cutting pedestal 504. The shape, size and spacing of the recessed areas 518 on each cutting pedestal 504 will vary with the type, size, and spacing of the connectors 306 of another side 302 of substrate 40. The clamps 506 mounted on clamp pedestals 508 may be secured thereto by any suitable type of retaining apparatus, such as a threaded member 520. The chuck 500 may be fabricated from any suitable material, such as metal commonly used for the dicing of substrates having semiconductor devices thereon.

Please amend paragraph [0041] as follows:

[0041] Referring to drawing FIG. 8, the chuck 500 illustrated in a side view. As shown, the apertures 514 in each cutting pedestal 504 has an aperture 522 connected to aperture 524 which, in turn, is connected to aperture 526 in the chuck shaft 528 to supply vacuum from a source of vacuum to each cutting pedestal 504. The shape, size, configuration, and layout of the apertures 522, 524, and 526 may be any suitable desired configuration to supply vacuum to each cutting pedestal 504. The alignment pins 510 mate with alignment apertures 43 in the substrate 40 (~~Seesee~~ drawing FIGS. 5 and ~~6~~ 6). The alignment pins 510 may be any desired

configuration, size, and shape to mate with any alignment aperture in substrate 40. The threaded member 520 may be any suitable type to retain the substrate clamps 506 on the clamp pedestals 508. The substrate clamps 506 may be of any suitable shape, size, and configuration to mate with portions of the substrate 40 to retain portions thereof on the cutting pedestals 504 and, if desired, on clamp pedestal 508.

**Amendments to the Claims:**

Claims 32 and 66 have been amended herein. Please note that all claims currently pending and under consideration in the referenced application are shown below. Please enter these claims as amended. This listing of claims will replace all prior versions and listings of claims in the application.

**Listing of Claims:**

1. (Withdrawn) In combination, a semiconductor substrate singulation saw and a chuck for holding a substrate comprising:  
a saw having at least one blade supported above a table and oriented to cut mutually parallel paths in the surface of a semiconductor substrate positioned on said table; and  
a chuck having at least one cutting pedestal located thereon mounted on said table, said chuck for holding said substrate during cutting thereof by said saw.

2. (Withdrawn) The combination of claim 1, wherein said chuck further comprises:  
a chuck table; and  
a plurality of cutting pedestals, each cutting pedestal being mounted on said chuck table.

3. (Withdrawn) The combination of claim 2, wherein said chuck further comprises:  
at least one clamp pedestal; and  
at least one substrate clamp removably attached to a portion of the at least one clamp pedestal.

4. (Withdrawn) The combination of claim 3, wherein said chuck further comprises:  
at least one alignment apparatus having a portion attached to the chuck table.

5. (Withdrawn) The combination of claim 4, wherein said alignment apparatus comprises:  
at least one alignment pin having a portion for engaging a portion of the substrate.

6. (Withdrawn) The combination of claim 4, wherein said at least one alignment apparatus comprises:  
an aperture in the chuck table for receiving said substrate therein.

7. (Withdrawn) The combination of claim 4, wherein said at least one alignment apparatus comprises:  
a pair of alignment pins, each alignment pin having a portion thereof attached to the chuck table  
and a portion for engaging a portion of said substrate.

8. (Withdrawn) The combination of claim 1, the saw further comprising:  
at least two blades for sawing said substrate.

9. (Withdrawn) The combination of claim 8, wherein at least one of said at least two blades is laterally translatable relative to another of said at least two blades.

10. (Withdrawn) The combination of claim 9, wherein said at least one of said at least two blades is raisable relative to another of said at least two blades.

11. (Withdrawn) The combination of claim 8, wherein said table is translatable in at least one direction relative to said at least two blades.

12. (Withdrawn) The combination of claim 8, wherein said at least two blades are translatable in at least one direction relative to said table.

13. (Withdrawn) In combination, a semiconductor substrate singulation saw and a table for mounting a substrate comprising:  
a saw having at least two blades supported above a table and oriented to cut mutually parallel paths in a surface of a semiconductor substrate positioned on said table; and

a chuck having at least one cutting pedestal located thereon mounted on said table, said chuck for holding said substrate during cutting thereof by said saw.

14. (Withdrawn) The combination of claim 13, wherein said chuck further comprises:  
a chuck table; and  
a plurality of cutting pedestals, each cutting pedestal being mounted on said chuck table.

15. (Withdrawn) The combination of claim 14, wherein said chuck further comprises:  
at least one clamp pedestal; and  
at least one substrate clamp removably attached to a portion of the at least one clamp pedestal.

16. (Withdrawn) The combination of claim 15, wherein said chuck further comprises:  
at least one alignment apparatus having a portion attached to the chuck table.

17. (Withdrawn) The combination of claim 16, wherein said at least one alignment apparatus comprises:  
at least one alignment pin having a portion for engaging a portion of the substrate.

18. (Withdrawn) The combination of claim 16, wherein said at least one alignment apparatus comprises:  
an aperture in the chuck table for receiving said substrate therein.

19. (Withdrawn) The combination of claim 16, wherein said at least one alignment apparatus comprises:  
a pair of alignment pins, each alignment pin having a portion thereof attached to the chuck table  
and a portion for engaging a portion of said substrate.

20. (Withdrawn) The combination of claim 13, the saw further comprising:  
at least two blades for sawing said substrate.



21. (Withdrawn) The combination of claim 20, wherein at least one of said at least two blades is laterally translatable relative to another of said at least two blades.

22. (Withdrawn) The combination of claim 21, wherein said at least one of said at least two blades is raisable relative to another of said at least two blades.

23. (Withdrawn) The combination of claim 20, wherein said table is translatable in at least one direction relative to said at least two blades.

24. (Withdrawn) The combination of claim 20, wherein said at least two blades are translatable in at least one direction relative to said table.

25. (Withdrawn) A chuck used for semiconductor substrate singulation for holding a substrate to be singulated in a saw having a table comprising:  
a chuck having at least one cutting pedestal located thereon mounted on said table, said chuck for holding said substrate during cutting thereof by said saw.

26. (Withdrawn) The chuck of claim 25, wherein said chuck further comprises:  
a plurality of cutting pedestals, each cutting pedestal being mounted on said table.

27. (Withdrawn) The chuck of claim 26, wherein said chuck further comprises:  
at least one clamp pedestal; and  
at least one substrate clamp removably attached to a portion of the at least one clamp pedestal.

28. (Withdrawn) The chuck of claim 27, wherein said chuck further comprises:  
at least one alignment apparatus having a portion attached to the chuck table.

29. (Withdrawn) The chuck of claim 28, wherein said at least one alignment apparatus comprises:  
at least one alignment pin having a portion for engaging a portion of the substrate.

30. (Withdrawn) The chuck of claim 28, wherein said at least one alignment apparatus comprises:  
an aperture in the chuck table for receiving said substrate therein.

31. (Withdrawn) The chuck of claim 28, wherein said at least one alignment apparatus comprises:  
a pair of alignment pins, each alignment pin having a portion thereof attached to the chuck table  
and a portion for engaging a portion of said substrate.

32. (Currently Amended) A method for singulating a plurality of semiconductor devices located on a substrate comprising:  
providing a saw having at least one blade and a table;  
providing a chuck having at least one cutting pedestal located thereon mounted on the table, said  
chuck for holding said substrate during cutting thereof by said saw;  
providing a substrate having a plurality of semiconductor devices located thereon;  
placing said substrate in the chuck;  
aligning the substrate in the chuck;  
supporting at least one semiconductor device on a portion of the chuck such that at least one of  
said pedestals partially supports a portion of said substrate;  
applying a vacuum to a portion of the at least one semiconductor device supported on a portion  
of the at least one cutting pedestal of the chuck, thereby predisposing said portion of the at least  
one semiconductor device to remain in contact with said at least one cutting pedestal;  
sawing at least one semiconductor device from said substrate; and  
sawing at least one other semiconductor device from said substrate by laterally indexing of the  
saw using one of a multiple greater than one of a fixed interval and a variable interval.

33. (Canceled)

34. (Previously Presented) The method of claim 32, further comprising:  
sawing the plurality of semiconductor devices from said substrate at substantially the same time.

35. (Previously Presented) The method of claim 32, further comprising:  
supporting the plurality of semiconductor devices on a portion of the chuck.

36. (Previously Presented) The method of claim 34, further comprising:  
supporting the plurality of semiconductor devices on portions of the chuck during the sawing  
thereof from said substrate.

37. (Withdrawn) A method for singulating a plurality of semiconductor devices located  
on a substrate comprising:  
providing a saw having at least two blades and a table;  
providing a chuck having at least two cutting pedestals located thereon mounted on the table,  
said chuck for holding said substrate during the cutting thereof by said saw;  
providing a substrate having a plurality of semiconductor devices located thereon;  
placing said substrate in the chuck;  
aligning the substrate in the chuck;  
supporting at least two semiconductor devices on portions of the chuck; and  
sawing the at least two semiconductor devices from said substrate.

38. (Withdrawn) The method of claim 37, further comprising:  
applying a vacuum to a portion of the at least two semiconductor devices supported on portions  
of the at least two cutting pedestals of the chuck.

39. (Withdrawn) The method of claim 37, further comprising:  
sawing more than two semiconductor devices from said substrate at substantially the same time.

40. (Withdrawn) The method of claim 37, further comprising:  
supporting more than two semiconductor devices on a portion of the chuck.

41. (Withdrawn) The method of claim 37, further comprising:  
supporting a plurality of more than two semiconductor devices on portions of the chuck during  
the sawing thereof from said substrate.

42. (Withdrawn) An apparatus for singulation of a semiconductor substrate comprising:  
a saw having at least one blade supported above a table and oriented to cut mutually parallel  
paths in a surface of a semiconductor substrate positioned on said table; and  
a chuck having at least one cutting pedestal located thereon mounted on said table, said chuck for  
holding said substrate during cutting thereof by said saw.

43. (Withdrawn) The apparatus of claim 42, wherein said chuck further comprises:  
a chuck table; and  
a plurality of cutting pedestals, each cutting pedestal being mounted on said chuck table.

44. (Withdrawn) The apparatus of claim 42, wherein said chuck further comprises:  
at least one clamp pedestal; and  
at least one substrate clamp removably attached to a portion of the at least one clamp pedestal.

45. (Withdrawn) The apparatus of claim 44, wherein said chuck further comprises:  
at least one alignment apparatus having a portion attached to the table.

46. (Withdrawn) The apparatus of claim 45, wherein said at least one alignment  
apparatus comprises:  
at least one alignment pin having a portion for engaging a portion of the substrate.

47. (Withdrawn) The apparatus of claim 45, wherein said at least one alignment apparatus comprises:  
an aperture in the chuck table for receiving said substrate therein.

48. (Withdrawn) The apparatus of claim 45, wherein said at least one alignment apparatus comprises:  
a pair of alignment pins, each alignment pin having a portion thereof attached to the chuck table  
and a portion for engaging a portion of said substrate.

49. (Withdrawn) The apparatus of claim 42, the saw further comprising:  
at least two blades for sawing said substrate.

50. (Withdrawn) The apparatus of claim 49, wherein at least one of said at least two blades is laterally translatable relative to another of said at least two blades.

51. (Withdrawn) The apparatus of claim 50, wherein the at least one of said at least two blades is raisable relative to said another of said at least two blades.

52. (Withdrawn) The apparatus of claim 49, wherein said table is translatable in at least one direction relative to said at least two blades.

53. (Withdrawn) The apparatus of claim 49, wherein said at least two blades are translatable in at least one direction relative to said table.

54. (Withdrawn) An apparatus for the singulation of a substrate comprising:  
a saw having at least two blades supported above a table and oriented to cut mutually parallel  
paths in a surface of a semiconductor substrate positioned on said table; and  
a chuck having at least one cutting pedestal located thereon mounted on said table, said chuck for  
holding said substrate during cutting thereof by said saw.

55. (Withdrawn) The apparatus of claim 54, wherein said chuck further comprises:  
a chuck table; and  
a plurality of cutting pedestals, each cutting pedestal being mounted on said chuck table.

56. (Withdrawn) The apparatus of claim 55, wherein said chuck further comprises:  
at least one clamp pedestal; and  
at least one substrate clamp removably attached to a portion of the at least one clamp pedestal.

57. (Withdrawn) The apparatus of claim 56, wherein said chuck further comprises:  
at least one alignment apparatus having a portion attached to the table.

58. (Withdrawn) The apparatus of claim 57, wherein said at least one alignment  
apparatus comprises:  
at least one alignment pin having a portion for engaging a portion of the substrate.

59. (Withdrawn) The apparatus of claim 57, wherein said at least one alignment  
apparatus comprises:  
an aperture in the chuck table for receiving said substrate therein.

60. (Withdrawn) The apparatus of claim 57, wherein said at least one alignment  
apparatus comprises:  
a pair of alignment pins, each alignment pin having a portion thereof attached to the chuck table  
and a portion for engaging a portion of said substrate.

61. (Withdrawn) The apparatus of claim 54, the saw further comprising:  
at least two blades for sawing said substrate.

62. (Withdrawn) The apparatus of claim 61, wherein at least one of said at least two blades is laterally translatable relative to another of said at least two blades.

63. (Withdrawn) The apparatus of claim 62, wherein the at least one of said at least two blades is raisable relative to another of said at least two blades.

64. (Withdrawn) The apparatus of claim 61, wherein said table is translatable in at least one direction relative to said at least two blades.

65. (Withdrawn) The apparatus of claim 61, wherein said at least two blades are translatable in at least one direction relative to said table.

66. (Currently Amended) A method for singulating a substrate having a plurality of semiconductor devices located thereon using a saw having at least one blade and a table having a chuck having at least one cutting pedestal, said chuck for holding said substrate, comprising:  
placing said substrate in the chuck;  
aligning the substrate in the chuck;  
supporting at least one semiconductor device on a portion of the chuck such that said at least one cutting pedestal partially supports a portion of said substrate;  
applying a vacuum to at least a portion of the at least one semiconductor device supported on a portion of the at least one cutting pedestal of the chuck, thereby predisposing said portion of the at least one semiconductor device to remain in contact with said at least one cutting pedestal;  
sawing at least one semiconductor device from said substrate; and  
sawing at least one other semiconductor device from said substrate by laterally indexing of the saw using one of a multiple greater than one of a fixed interval and a variable interval.

67. (Canceled)

68. (Previously Presented) The method of claim 66, further comprising:  
sawing the plurality of semiconductor devices from said substrate at substantially the same time.

69. (Previously Presented) The method of claim 66, further comprising:  
supporting the plurality of semiconductor devices on a portion of the chuck.

70. (Previously Presented) The method of claim 68, further comprising:  
supporting the plurality of semiconductor devices on portions of the chuck during the sawing  
thereof from said substrate.

71. (Withdrawn) A method for singulating a substrate having plurality of semiconductor  
devices using a saw having at least two blades and a table having a chuck having at least two  
cutting pedestals, said chuck for holding said substrate, comprising:  
placing said substrate in the chuck;  
aligning the substrate in the chuck;  
supporting at least two semiconductor devices on portions of the chuck; and  
sawing the at least two semiconductor devices from said substrate.

72. (Withdrawn) The method of claim 71, further comprising:  
applying a vacuum to a portion of the at least two semiconductor devices supported on portions  
of the at least one cutting pedestal of the chuck.

73. (Withdrawn) The method of claim 71, further comprising:  
sawing more than two semiconductor devices from said substrate at substantially the same time.

74. (Withdrawn) The method of claim 71, further comprising:  
supporting more than two semiconductor devices on a portion of the chuck.



75. (Withdrawn) The method of claim 71, further comprising:  
supporting a plurality of more than two semiconductor devices on portions of the chuck during  
the sawing thereof from said substrate.

**Amendments to the Drawings:**

The attached sheets of drawings include changes to drawing FIGS. 1, 2, 3, 8, and 9.  
These sheets replace the original sheets including drawings FIGS. 1, 2, 3, 8, and 9.

**REMARKS**

The Applicant has amended paragraphs [0028], [0031], [0040], and [0041] of the specification for editorial purposes.

This is in response to the Office Action mailed November 14, 2005.

Claims 1 through 32, 34 through 66 and 68 through 75 are currently pending in the application.

Claims 1 through 31, 37 through 65, and 71 through 75 are withdrawn from consideration as being directed to a non-elected invention.

Claims 32, 34 through 36, 66 and 68 through 70 stand rejected. Applicants have amended claims 32 and 66, and respectfully request reconsideration of the application as amended herein.

**35 U.S.C. § 102(b) Anticipation Rejections**

**Anticipation Rejection Based on U.S. Patent 5,809,987 to Wark et al.**

Claims 32, 34 through 36, 66 and 68 through 70 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Wark et al. (U.S. Patent 5,809,987). Applicants respectfully traverse this rejection, as hereinafter set forth.

Applicants assert that a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.

*Verdegaal Brothers v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

After carefully considering the cited prior art, the rejections, and the Examiner's comments, Applicants have amended the claimed invention to clearly distinguish over the cited prior art.

Applicants assert that the Wark et al. reference does not anticipate the claimed inventions of presently amended independent claims 32 and 66 under 35 U.S.C. § 102 because the Wark et al. reference does not identically describe each and every element of the claimed inventions in as complete detail as is contained in the claim.

Turning to the cited prior art, the Wark et al. reference describes a wafer cutting chuck used with a wafer cutting blade for cutting a semiconductor wafer into dice by dicing the wafer along the street indices.

Applicants assert that the Wark et al. reference does not identically describe the elements of the inventions set forth in presently amended independent claims 32 and 66 calling for "sawing at least one other semiconductor device from said substrate by laterally indexing of the saw using one of a multiple greater than one of a fixed interval and a variable interval". The Wark et al. reference contains no description whatsoever regarding such an element of the presently claimed inventions. At best, Applicants assert that the Wark et al. reference saws semiconductor devices using a multiple of one to index the saw to the next street on the wafer. Therefore, presently amended independent claims 32 and 66 are allowable as well as dependent claims 34 through 36 and 68 through 70 therefrom respectively.

### ENTRY OF AMENDMENTS

The amendments to claims 32 and 66 above should be entered by the Examiner because the amendments are supported by the as-filed specification and drawings and do not add any new matter to the application to clearly comply with the provisions of 35 U.S.C. § 132.

### CONCLUSION

Claims 32, 34 through 36, 66 and 68 through 70 are believed to be in condition for allowance, and an early notice thereof is respectfully solicited. Should the Examiner determine that additional issues remain which might be resolved by a telephone conference, he is respectfully invited to contact Applicants' undersigned attorney.

Respectfully submitted,



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Attachment: Replacement Sheet  
Annotated Sheet Showing Changes

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